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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/690,408

10/21/2003

Nicolay Y. Kovarsky

008451/CMP/ECP

7371

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7590

12/20/2006

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EXAMINER

WILKINS III, HARRY D

ART UNIT

PAPER NUMBER

1742

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

12/20/2006

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

**Application No.**

10/690,408

**Applicant(s)**

KOVARSKY ET AL.

**Examiner**

Harry D. Wilkins, III

**Art Unit**

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 36-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 36-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4 October 2006 has been entered.

### ***Status***

2. All previous grounds of rejection have been withdrawn in view of Applicant's amendments to claims 1 and 36 requiring the presence of more than one shelf (i.e., shelves).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-10 and 36-45 rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al (US 4,416,859) in view of Heiss et al (US 3,307,914).

Brown et al teach (see figure 1 and abstract) an apparatus for dissolving a solid salt into a flow of water comprising a vessel (24) having an inlet and an outlet, there being a plurality of impermeable shelves contained in the vessels, wherein the shelves

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were positioned to hold a chemical reagent and expose the chemical reagent to the solution flowing from the inlet to the outlet.

Thus, Brown et al fail to teach a porous material disposed in the fluid path defined in the cartridge.

Heiss et al teach (see cols. 1-2) that in devices that dissolve a slat in water, a filter was provided in the outlet of the vessel through which the solution is drawn to prevent particles from leaving the vessel.

Therefore, it would have been obvious to one of ordinary skill in the art to have added a filter (i.e.-porous material) in the liquid outlet line of the vessel of Brown et al to prevent any solid material from being transferred out of the vessel with the solution.

Regarding claims 2 and 36, the shelves of Brown et al were impermeable to the solution.

Regarding claims 3 and 38, the device of Brown et al included multiple shelves.

Regarding claims 4 and 39, there was a "headspace" located between each shelf through which the solution flowed.

Regarding claims 5 and 40, it would have been within the ability of one of ordinary skill in the art to have optimized the height of the headspace between each shelf in order to obtain optimum mixing conditions.

Regarding claims 6 and 41, the solution flows from the inlet to the outlet via the headspace.

Regarding claims 7 and 42, the solution is replenished with the chemical reagent (salt).

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Regarding claims 8 and 43, the chemical reagent is not positively recited by the claims. Thus, since the apparatus of Brown et al was capable of holding one of the disclosed compounds, Brown et al teach this claim.

Regarding claims 9 and 44, Brown et al teach using a flat shelf.

Regarding claims 10 and 45, Regarding claims 10 and 45, the porous material was a filter.

Regarding claim 37, Brown et al fail to teach the composition of the shelf. However, it would have been obvious to one of ordinary skill in the art to have made the shelf from a material which was resistant to the chemical reagent and the water, such as plastics or stainless steel in order to prevent damage to the cartridge by the solution.

5. Claims 8 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al (US 4,416,859) in view of Heiss et al (US 3,307,914) as applied above to claims 7 and 42 and further in view of Ting et al (US 5,997,712).

Brown et al fail to teach that the composition of the chemical reagent was one of those listed in either claim 8 or claim 43.

Assuming that the chemical reagent held by the shelf is given patentable weight, the claims are still not patentable.

Ting et al teach an apparatus for dispensing a chemical reagent into a plating solution including a tank (11) for containing the plating solution and a vessel (13) in fluid communication with the tank, wherein the vessel had an inlet and an outlet. The chemical reagent included copper hydroxide or copper oxide.

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Therefore, it would have been obvious to one of ordinary skill in the art to have used the dissolver of Brown et al for the dissolver of Ting et al because the dissolver of Brown et al provided an easy means to dissolve a solid material into a flowing water stream.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-10 and 36-45 have been considered but are moot in view of the new ground(s) of rejection.


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry D. Wilkins, III whose telephone number is 571-272-1251. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V. King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Harry D Wilkins, III  
Primary Examiner  
Art Unit 1742

hdw